

Agrisera

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Product no **AS06 141**
PC | Plastocyanin

Product information

Immunogen	Purified native plastocyanin from <i>Spinacia oleracea</i> UniProt: P00289
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
Reconstitution	For reconstitution add 50 µl of sterile water.
Storage	Store lyophilized/reconstituted at -20 °C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.
Additional information	Cellular [compartment marker] of chloroplast thylakoid lumen This product can be sold containing ProClin if requested.

Application information

Recommended dilution	1 : 100 (IG), 1 : 2000 (WB)
Expected apparent MW	10 kDa
Confirmed reactivity	<i>Arabidops thaliana</i> , <i>Brassica juncea</i> , <i>Heliantus annuus</i> , <i>Hordeum vulgare</i> , <i>Lathyrus sativus</i> , <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Pisum sativum</i> , <i>Spinacia oleracea</i> , <i>Solanum tuberosum</i> , <i>Zea mays</i>
Predicted reactivity	<i>Catalpa bungei</i> , Dicots, <i>Physcomitrella patens</i> , <i>Ricinus communis</i> , <i>Solanum lycopersicum</i> Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.
Additional information	Plastocyanin runs aberrant due to negative charge at 12-19 kDa on SDS-PAGE depending upon the system used. In 15 % gel the protein will run closer to its true MW than in 12 % gel. In some cases PC can be very acidic and run at twice of its MW. PC1 runs closer to 14 kDa while PC2 runs closer to 19 kDa. For good resolution adding fresh DTT to the sample buffer is recommended. PC2 is generally more abundant and it increases with Cu feeding. PC1 is expressed first after etiolated seedlings are placed in the light. For high resolution images, please visit the specific product page at www.agrisera.com
Selected references	Tokarz et al. (2021) . Stem Photosynthesis-A Key Element of Grass Pea (<i>Lathyrus sativus</i> L.) Acclimatisation to Salinity. <i>Int J Mol Sci.</i> 2021 Jan 12;22(2):685. doi: 10.3390/ijms22020685. PMID: 33445673; PMCID: PMC7828162. Galvis et al. (2020) . H ⁺ transport by K ⁺ EXCHANGE ANTIPORTER3 promotes photosynthesis and growth in chloroplast ATP synthase mutants. <i>Plant Physiol.</i> pp.01561.2019. doi: 10.1104/pp.19.01561. Simakawa et al. (2020) . Near-infrared in Vivo Measurements of Photosystem I and Its Lumenal Electron Donors With a Recently Developed Spectrophotometer. <i>Photosynth Res.</i> , 144 (1), 63-72 Wang et al. (2020) Rerouting of ribosomal proteins into splicing in plant organelles. <i>BioRxiv</i> , DOI: 10.1101/2020.03.03.974766 . Cha et al. (2019) . Arabidopsis GIGANTEA negatively regulates chloroplast biogenesis and resistance to herbicide butafenacil. <i>Plant Cell Rep.</i> 2019 Jul;38(7):793-801. doi: 10.1007/s00299-019-02409-x.

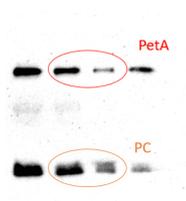
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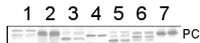
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Application example



Thylakoid membranes (10 µg of total chlorophyll) extracted freshly from *Hordeum vulgare* leaves with 100 mM HEPES-KOH (pH 7.5), 0.3 M sorbitol, 2 mM EDTA, and 1mM MgCl₂ and denatured with a Laemmli buffer at 80 °C for 5 min were separated on 12% SDS-PAGE and blotted 1 h to nitrocellulose (pore size of 0.2 µm), using semi-dry transfer. Blot was blocked with 4% milk for 2 h/RT with agitation. Blot was incubated in the primary antibody at a dilution of 1:3000 (PC and PetA, simultaneous western blot detection for both antibodies at the same time) for 1 h/RT with agitation in PBS-T. The antibody solution was decanted and the blot was rinsed briefly, then washed 3 times for 5 min in PBS-T at RT with agitation. Blot was incubated in Agrisera matching secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated) diluted to 1:25000 in for 1 h/RT with agitation. The blot was washed as above and developed for 5 min with chemiluminescent detection reagent according to manufactures recommendations. Exposure time was 30 seconds. Simultaneous western blot detection can be applied if MW of detected proteins differs in min. 20 kDa.

Courtesy Dr. Anja Liskay, CNRS, France



10 µg of total protein from *Arabidopsis thaliana* (1), *Brassica juncea* (2), *Zea mays* (3), *Oryza sativa* (4), *Solanum lycopersicum* (5), *Nicotiana tabacum* (6), *Heliantus annuus* (7) were separated on SDS-PAGE and blotted to **nitrocellulose**. Filters were probed with anti-PC antibody (AS06 141, 1:2000). Signal was developed using alkaline phosphatase conjugated secondary antibody. Each sample was run in duplicate. Signal was developed using alkaline conjugated secondary antibody.

This antibody will also work well with HRP-conjugated secondary antibodies, as [AS09 602](#).